Claims

The claims are listed as follows:

1. (Currently Amended) A computer-implemented method, comprising:

storing a list of physical resource objects;

storing a list of virtual resource objects;

storing a list of parent and child objects~~, a parent object to represent a physical resource object, and a child object to represent a virtual resource object; and~~

creating a tree of relationships of the parent and child objects to the physical and virtual resource objects; and

determining a net availability of a resource of a parent object by traversing the tree of relationships.

2. (Original) The method of claim 1, wherein storing a list of virtual resource objects includes storing an object representing system memory bandwidth.

3. (Original) The method of claim 2, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

4. (Original) The method of claim 3, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed.

5. (Original) The method of claim 4, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

6. (Original) The method of claim 4, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

7. (Original) The method of claim 4, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

8. (Previously Presented) The method of claim 1, wherein a root of the tree represents a physical resource object.

9. (Previously Presented) The method of claim 1, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

10. (Original) The method of claim 9, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed.

11. (Original) The method of claim 10, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

12. (Original) The method of claim 10, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

13. (Original) The method of claim 10, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

14. (Currently Amended) A method, comprising:

maintaining a record of available resources;

maintaining a record of consumed resources;

tracking a relationship among resource producers and consumers in a tree data structure, a root of the tree data structure to represent a physical device that consumes the available resources; ~~and~~

determining a net availability of a resource producer by traversing the tree data structure; and

updating the records of available and consumed resources upon a change in relationship among resource producers and resource consumers.

15. (Previously Presented) The method of claim 14, wherein tracking relationships among resource producers and resource consumers includes tracking a relationship between a system memory bandwidth producer and a system memory bandwidth consumer.

16. (Previously Presented) The method of claim 14, wherein tracking relationships among resource producers and resource consumers includes tracking a relationship between a graphics local memory bandwidth producer and a graphics local memory consumer.

17. (Currently Amended) A machine-readable medium having stored thereon instructions which, when executed by a computer system, causes the computer system to perform a method comprising:

storing a list of physical resource objects;

storing a list of virtual resource objects;

storing a list of parent and child objects~~, a parent object to represent a physical resource object, and a child object to represent a virtual resource object~~; ~~and~~

creating a tree of relationships of the parent and child objects to the physical and virtual resource objects; and

determining a net availability of a resource of a parent object by traversing the tree of relationships.

18. (Original) The machine-readable medium of claim 17, wherein storing a list of virtual resource objects includes storing an object representing system memory bandwidth.

19. (Original) The machine-readable medium of claim 18, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

20. (Original) The machine-readable medium of claim 19, wherein storing an object representing a functional unit that consumes bandwidth includes storing an indication of the amount of bandwidth consumed.

21. (Original) The machine-readable medium of claim 20, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

22. (Original) The machine-readable medium of claim 20, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

23. (Original) The machine-readable medium of claim 20, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

24. (Original) The machine-readable medium of claim 17, wherein storing a list of virtual resource objects includes storing an object representing local graphics memory bandwidth.

25. (Original) The machine-readable medium of claim 24, wherein storing a list of child objects includes storing an object representing a functional unit that consumes bandwidth.

26. (Previously Presented) The machine-readable medium of claim 17, wherein a root of the tree represents a physical resource object.

27. (Original) The machine-readable medium of claim 26, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents an overlay unit.

28. (Original) The machine-readable medium of claim 26, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a cursor unit.

29. (Original) The machine-readable medium of claim 26, wherein storing an object representing a functional unit that consumes bandwidth includes storing an object that represents a display output unit.

30. (Currently Amended) A machine-readable medium having stored thereon instructions which, when executed by a computer system, causes the computer system to perform a method comprising:

maintaining a record of available resources;

maintaining a record of consumed resources;

tracking relationships among resource producers and resource consumers in a tree data structure, a root of the tree data structure to represent a physical device that consumes the available resources; ~~and~~

determining a net availability of a resource producer by traversing the tree data structure; and

updating record of available and consumed resources upon a change in relationship among resource producers and resource consumers.

31. (Previously Presented) The machine-readable medium of claim 30, wherein tracking relationships among resource producers and resource consumers includes tracking a relationship between a system memory bandwidth producer and a system memory bandwidth consumer.

32. (Previously Presented) The machine-readable medium of claim 31, wherein tracking relationships among resource producers and resource consumers includes tracking a relationship between a graphics local memory bandwidth producer and a graphics local memory consumer.